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Investing in information and communications technology: status report

Report of the Secretary-General

Summary

The present report is submitted in accordance with paragraph 3, section II, of General Assembly resolution 60/283. It provides the status on the development of an information and communications technology governance framework for the United Nations Secretariat worldwide, pending submission of a comprehensive approach to the General Assembly at the second part of its resumed sixty-second session. In addition, the report includes a request for resources for a small support team to assist the Chief Information Technology Officer, who assumed his duties in late August, in developing a vision, strategy, programme, and governance framework for information and communications technology in the Secretariat.

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I. Introduction

1. Major advances in information and communications technology (ICT), combined with the rapid growth of global networks such as the Internet and wireless communications, create opportunities for the United Nations Secretariat to realize the vision of a global and integrated Secretariat. Information and communications technology is the key enabler that allows the Organization to be effective and efficient in carrying out its work, and adapt to changing environments. By harnessing strategically the power of ICT, the Organization can accelerate the realization of its mission and growing commitments in the knowledge-intensive, interconnected twenty-first century.

2. As the long-term success of the Organization's mission depends more upon ICT, decision-making related to ICT becomes more critical. ICT governance deals with how key ICT decisions are made, who gets to make them, and who is accountable for what. Organizations with effective ICT governance link their business strategy, desirable behaviour, business and information technology (IT) goals, and performance metrics. Achieving effective ICT governance is a major challenge for large, complex and geographically dispersed organizations. According to a study of a premier consulting firm, organizations with high performing ICT governance tend to share the following common traits: clearly differentiated business strategies; clear business objectives for ICT investments; high-level executive participation in ICT governance; stable ICT governance, with few changes from one year to the next; well-functioning, formal exception processes; and formal communication methods.[1]

3. The General Assembly, in its resolution 60/283, recognizing the strategic importance of ICT as a critical reform instrument, approved the post of Chief Information Technology Officer in the Executive Office of the Secretary-General. On the basis of the work of the new Chief Information Technology Officer, who assumed his duties in late August 2007, the present report is submitted to the General Assembly to provide the status on the development of an ICT governance framework for the United Nations Secretariat worldwide.

4. The present report presents: (a) a synopsis of the previous reports of the Secretary-General and resolutions of the General Assembly concerning ICT governance; (b) the key principles that will serve as the foundation for effective ICT governance; (c) a summary of the ongoing efforts to address outstanding ICT issues.

II. Background

5. Significant progress has been made towards the realization of effective and efficient ICT operations in all offices of the Secretariat since the launch of the ICT strategy in 2002. Today all offices of the Secretariat apply uniform ICT standards and have reached similar levels of technological capabilities. However, the disparate development of information technology systems driven largely by departmental, regional, and local needs, without the adoption of an organization-wide ICT vision, strategy and governance, has been neither effective nor cost-efficient. In fact, the

[1] M. Broadbent and P. Weill, *Effective IT Governance — by Design*, EXP Premier report (The Gartner, Inc., January 2003).

absence of strategic management of ICT investments and operations has largely contributed to the situation of gaps and deficiencies reported in the report of the Secretary-General on investing in information and communications technology (A/60/846/Add.1). In short, the Secretariat has not yet been able to fully leverage ICT in a manner in which the entire Organization can benefit from its potential to the fullest extent.

6. In the context of the increasingly critical role of ICT for the Organization, there have been a number of major reports of the Secretary-General and resolutions of the General Assembly concerning ICT governance for the past several years, as follows:

(a) *Report of the Secretary-General on an information and communications technology strategy* (A/57/620). The report of the Secretary-General presents an ICT strategic vision and strategy for the Secretariat and includes initiatives that need to be undertaken by the Organization. The ICT strategy builds on the objectives and framework laid out in the earlier report of the Secretary-General entitled "Information technology in the Secretariat: a plan of action" (A/55/780), and addresses the requests and observations made by the General Assembly in its resolution 56/239. The proposed strategy comprises three underlying themes: alignment with programmatic goals; projected return on investment; and governance. The strategy calls for a governance structure in line with the organizational complexity of the Secretariat that provides for central policy and standard-setting, as well as the necessary level of central, departmental and geographical representation and participation in all relevant ICT initiatives and decisions. That governance body — the Information and Communications Technology Board — is the interdepartmental body entrusted with the coordination, integration and harmonization of ICT initiatives in the United Nations Secretariat;

(b) *Resolution 57/304 on an information and communications technology strategy*. In the resolution, the Assembly welcomed the significant step the Secretary-General had taken to develop a strategic framework to guide the further development of ICT in the Secretariat. It stressed the importance of ICT as a strategic tool for strengthening the functioning of the Secretariat. The Assembly recognized the potential of ICT for improving effectiveness and work practices throughout the Organization, for facilitating multilingualism, including public information activities, and for enhancing programme delivery. In particular, the Assembly noted as key elements of the ICT strategy a governance structure and the requirements to ensure that investments in ICT generate tangible returns commensurate with their costs. The Assembly requested information on the further strengthening of governance and central leadership arrangements;

(c) *Report of the Secretary-General entitled "Information and communications technology strategy: implementation of General Assembly resolution 57/304 of 15 April 2003"* (A/58/377). The report of the Secretary-General provides an update on the ICT strategy of 2002. In particular, the report indicates how the governance and leadership arrangements for ICT activities have been strengthened. The Project Review Committee of the Information and Communications Technology Board provides a strong, central authority over ICT initiatives for the Organization as a whole. The Committee is charged with reviewing each ICT initiative, following a documented procedure, to ensure that (a) a uniform methodology is being followed to articulate and justify the rationale

behind the investment, including projected return on investments; (b) ICT standards for the development of systems are consistently applied; (c) total cost of projects are accurately projected, including ongoing maintenance and support; (d) comprehensive documentation is made available through the entire life cycle of a project;

(d) *Addendum 1 to the detailed report of the Secretary-General on investing in the United Nations for a stronger Organization worldwide, entitled "Investing in information and communications technology"* (A/60/846/Add.1). The addendum puts forward two major proposals regarding ICT: (a) the creation of the post of the Chief Information Technology Officer, at the Assistant Secretary-General level, and (b) the urgent upgrading of Secretariat-wide ICT systems dealing with human, financial and physical resources. The Chief Information Technology Officer would be entrusted with the responsibility for developing the overall ICT strategy for the Organization and leading its implementation. The position would carry sufficient central authority to effectively manage directly, or through appropriate delegation, all ICT activities in the Secretariat. The authority would cover activities at Headquarters, offices away from Headquarters, as well as in the field, including all peacekeeping and other field missions. The Management Committee, with the Chief Information Technology Officer as a permanent member, would consider and decide on any significant information technology investment initiatives. After the establishment of the position of the Chief Information Technology Officer, he/she would establish the appropriate strategies and structure of the Office of Information and Communications Technology within the Department of Management;

(e) *Resolution 60/283 entitled "Investing in the United Nations for a stronger Organization worldwide: detailed report"*. As part of the resolution, the General Assembly decided to establish the post of Chief Information Technology Officer at the level of Assistant Secretary-General in the Executive Office of the Secretary-General. In addition, the General Assembly requested: (a) at its sixty-second session, to rejustify the level and resource requirements for the post of the Chief Information Technology Officer in the context of the proposed programme budget for the biennium 2008-2009, taking fully into account the existing staffing structure and resources dedicated to ICT functions in the Organization; (b) at its resumed sixty-first session, detailed information on the structure and staffing requirements of the envisaged ICT structure, as well as the lines of responsibility, the functions of the proposed structure and its relationship with other ICT units in Headquarters departments, offices away from Headquarters, regional economic commissions, and field missions; (c) at its resumed sixty-first session, the comprehensive report referred to in paragraphs 17 and 18 of the report of the Secretary-General (A/60/846/Add.1) and to respond to other relevant General Assembly resolutions;

(f) *Comprehensive report of the Secretary-General on strengthening the capacity of the United Nations to manage and sustain peace operations* (A/61/858 and Corr.1), *and resolution 61/279*. In his report, the Secretary-General recommended that a new Department of Field Support be created to strengthen the capacity of the Organization to mount and sustain peace operations. In paragraph 82 of his report, the Secretary-General proposed that the Department of Field Support would be responsible for delivering "dedicated support to United Nations field operations, including on personnel, finance, procurement, logistical, communications, information technology, and other administrative and general

management issues. ... To strengthen the efficiency and coherence of support provided to the field and to ensure effective oversight, existing Headquarters capacities related to field operations would be consolidated and assigned to the Department of Field Support". By its resolution 61/279, the General Assembly approved the establishment of the Department of Field Support with the functions outlined in the aforementioned report of the Secretary-General.

III. Key principles of information and communications technology governance

7. On the basis of the earlier reports of the Secretary-General and resolutions of the General Assembly as well as best practices in IT governance, a number of key principles have been developed to serve as the foundation for establishing the ICT governance framework of the United Nations Secretariat worldwide. These principles are: (a) business strategy drives ICT investments for better outcomes; (b) the Chief Information Technology Officer is responsible for the overall direction and performance of ICT activities in the Organization; (c) the Office of Information and Communications Technology is provided with sufficient authority and resources to manage significant ICT activities that affect the entire Organization; (d) a sensible balance between centralization and decentralization of ICT functions is maintained; and (e) ICT units and staff are centres of excellence for innovation. These principles are further explained below.

8. *Business strategy drives ICT initiatives for better outcomes.* The mission and substantive programme of the Secretariat must be the primary basis for ICT investments for the future. Therefore, it is essential to take a strategic approach for understanding the critical needs of the Organization and aligning ICT initiatives to meeting those needs. Asking questions such as "How does Internet technology support our mission?" and "How can we apply modern technologies and methods to supporting management reform?" need to be the accepted practices rather than the exception. The strategic approach requires the senior management of the Organization to engage in prioritizing and selecting ICT investments. At the same time, the approach also requires the Chief Information Technology Officer and senior managers dealing with ICT to participate in management discussions of the Organization's strategy and improvement efforts. Therefore, it is necessary to create a collaborative and effective decision-making environment in which top business and ICT managers can discuss and guide the Organization's ICT strategy and investments.

9. *The Chief Information Technology Officer is responsible for the overall direction and performance of ICT activities in the Organization.* The Chief Information Technology Officer is provided with sufficient central authority and resources to oversee ICT activities in the United Nations Secretariat worldwide. The key functions and responsibilities of the Chief Information Technology Officer are to:

(a) Provide a strategic vision and leadership for information and technology management for the Secretariat worldwide;

(b) Act as the principal representative of the Secretary-General on technology and knowledge management issues;

(c) Provide advice to the Management Committee on ICT decisions and matters, in his capacity as a permanent member of the Committee;

(d) Promulgate policies and standards on ICT matters;

(e) Participate in ICT steering committees that oversee major ICT initiatives;

(f) Oversee organization-wide ICT project implementation and change management processes;

(g) Head the Office of Information and Communications Technology which is responsible for carrying out strategic ICT activities and providing shared services affecting the entire Organization;

(h) Oversee, through appropriate delegation, ICT operations and investments at all offices of the Secretariat;

(i) Monitor and improve the effectiveness of the overall ICT governance framework.

10. *The Office of Information and Communications Technology is provided with sufficient authority and resources to manage significant ICT activities that affect the entire Organization.* The main functions of the Office, headed by the Chief Information Technology Officer, are to:

(a) Undertake strategic planning of major ICT systems and initiatives supporting the Organization's mission and programmes across all offices;

(b) Review budgets from all sources of funds for all ICT initiatives and operations of the Organization;

(c) Monitor, measure and evaluate the performance of ICT units against the established goals, objectives, and budgetary targets;

(d) Set technological directions and architecture for the Organization;

(e) Plan and develop all Organization-wide ICT applications, including, inter alia, an enterprise resources planning system and other major systems;

(f) Plan and develop the overall infrastructure architecture encompassing communications networks and data centres of the Organization;

(g) Leverage the Organization's global presence and ICT infrastructure to execute and host ICT solutions and shared services in order to maximize benefits and cost-effectiveness;

(h) Undertake, in collaboration with other ICT units, ICT research and development activities;

(i) Oversee the assessment and management of ICT risks for the Organization;

(j) Develop and maintain the information security policy of the Organization and monitor its compliance across operational units;

(k) Oversee the implementation of the disaster recovery and business continuity plans for the Organization;

(l) Develop and maintain the ICT human resources management strategy and programme.

11. Information and communications technology is a powerful instrument that provides cross-cutting and specialized services essential for the overall efficient performance of the Secretariat and is crucial in supporting the management reform and overall modernization of the Organization. The scope of functions of the Office of Information and Communications Technology is broad. It encompasses setting strategic ICT goals requiring the attention of the Executive Office of the Secretary-General, as well as implementing Secretariat-wide changes to achieve these goals, requiring a sufficient level of resources to ensure the successful delivery of significant results for the entire Organization. Integrating the two functions (i.e., strategic goal-setting and ability to implement changes) will allow the Office of Information and Communications Technology to achieve its overall effectiveness for the long term. In that regard, the Office should be provided with sufficient authority and resources under its direct control to produce far-reaching results. To carry out its mandate effectively, the Office of Information and Communications Technology should be an independent unit, reporting directly to the Executive Office of the Secretary-General.

12. *A sensible balance between centralization and decentralization of ICT functions is maintained.* As is the case in other large, complex, and geographically dispersed organizations, the effectiveness of the envisaged overall ICT structure for the Secretariat will depend on establishing a proper balance between centralized functions and those requiring sufficient delegated authority to be performed effectively. Excessive centralization can hinder the ability of field operations to deliver effective and responsive services, while excessive decentralization tends to create duplication, waste, loss of strategic coherence and accountability, as well as uneven levels of technological innovation. It is therefore important to differentiate the main functions of other ICT units in the Organization from those of the Office of Information and Communications Technology mentioned earlier.

13. In that regard, the main functions of ICT units of Headquarters departments, offices away from Headquarters, and field missions, under delegated authority, are to:

(a) Assess departmental or local business needs and required supporting technology solutions;

(b) Develop and maintain applications to meet specific local requirements in conformity with the Organization-wide ICT strategy and standards;

(c) Identify local ICT infrastructure requirements;

(d) Manage local day-to-day ICT operations;

(e) Define and manage departmental or local service levels and contractual agreements;

(f) Develop and manage departmental or local ICT budgets;

(g) Coordinate and provide training for departmental or local users;

(h) Execute departmental or local disaster recovery and business continuity plans;

(i) Administer the security of departmental or local information and data in conformity with the Organization-wide information security policy and guidelines.

14. The development of all new ICT initiatives, whether customized systems or the result of acquisitions of software packages, regardless of their source of funding, is subject to a review by the Office of Information and Communications Technology. The review process is intended to ensure the proper strategic directions and coherence across the Organization as well as assessing the projected added value and return on investment from the initiatives. However, the ultimate authority for prioritizing and approving major ICT initiatives resides with the Management Committee — the highest level executive committee on management matters, including ICT.

15. *Information and communications technology units and staff are the centres of excellence for innovation.* In complex, multidimensional organizations such as the United Nations Secretariat, innovation cannot originate from a single source whether it is Headquarters in New York, an office away from Headquarters, or a field mission. To encourage ICT innovation across the board, the Secretariat should move away from a Headquarters-centric approach to a network-based collaborative model in which any ICT units can initiate and develop effective ICT solutions in close cooperation and collaboration with other units in the system. In this model, information on any effective ICT solutions and methods should be readily available for sharing and implementation within the Secretariat.

16. Information and communications technology units should be encouraged to create a critical mass of specific core competencies or skills to serve as the centre of excellence within the Organization. In addition, an appropriate administrative mechanism and staff training programmes should be established to allow staff to easily move from one ICT unit to another for career development and skills acquisition. The long-term viability of the Organization's ICT is critically dependent upon the availability of a competent, mobile, and motivated ICT workforce. In that regard, the new ICT governance framework should support all ICT units to achieve excellence in managing their ICT activities and staff.

IV. Ongoing efforts to address outstanding information and communications technology issues

17. The Chief Information Technology Officer, recruited through an open and competitive process, assumed his duties at the United Nations Secretariat in late August 2007. The Chief Information Technology Officer is assigned to the Executive Office of the Secretary-General and serves as a permanent member of the Management Committee. The Chief Information Technology Officer has begun to gather broadly views on ICT from Member States, Headquarters departments, offices away from Headquarters, regional economic commissions, and field missions. The Chief Information Technology Officer has also established a working group to firm up the strategy and approach for the project of developing a new enterprise resources planning system to replace the Integrated Management Information System (IMIS), Galaxy and other related systems. On the basis of the earlier work of the Secretariat as well as his knowledge and experience, the Chief Information Technology Officer has made significant progress towards the identification of the key principles of ICT governance of the Organization, and has had extensive consultation with the Department of Management and the Department

of Field Support, where most of the ICT resources of the Organization are currently located.

18. Given the importance of this issue for the long-term strategic development of the Organization, however, the Secretary-General considers that further and broader consultations using the principles of ICT governance with all stakeholders are necessary before a comprehensive proposal can be made. The Chief Information Technology Officer, who has recently taken up his duties, will need more time to gather all relevant information and address outstanding issues on ICT, including the development of the ICT governance framework. More specifically, the Chief Information Technology Officer needs to:

(a) Assess the current state of ICT and developing an appropriate management and organizational approach;

(b) Continue to broadly solicit inputs from key stakeholders to assess key ICT challenges and issues facing the Organization;

(c) Develop the medium-term IT vision, strategy and the supporting high-level programme in consultation with the Department of Management, the Department of Field Support, other Headquarters departments, offices away from Headquarters, regional economic commissions, and field missions;

(d) Develop the ICT governance framework for the Secretariat worldwide, including the establishment of decision-making bodies, advisory groups, as well as the articulation of functions, authority, structure, and resource requirements of the envisaged Office of Information and Communications Technology and its relationship with other ICT units of Headquarters departments, offices away from Headquarters, regional economic commissions, and field missions with particular attention to the management of ICT support for peace operations;

(e) Set up an interim management arrangement and communication channels through which the Chief Information Technology Officer can oversee ICT work across the board and participate in major decision-making;

(f) Lead a comprehensive architectural review exercise, aimed at creating a coherent global communications and infrastructure design of the Secretariat and developing an operational model;

(g) Oversee and guide ongoing major ICT initiatives, such as the enterprise resources planning project and other major ICT development projects.

19. Both the Department of Management and the Department of Field Support are assisting the Chief Information Technology Officer by providing a limited level of temporary staff and other resources. However, in order to enable the Chief Information Technology Officer to accomplish the above tasks and carry out other ongoing work, a small support team reporting directly to the Chief Information Technology Officer needs to be established, for the period January through June 2008. Considering that the outcomes will affect the long-term effectiveness and efficiency of ICT in the Secretariat worldwide, it is essential that the tasks be carried out in a thorough and comprehensive manner. The tasks will require not only in-depth research and analysis together with expert assistance, as appropriate, but also extensive consultations with staff at Headquarters departments, offices away from Headquarters, regional economic commissions and field missions.

20. To fund the interim team of the Chief Information Technology Officer, general temporary assistance resources in the amount of $421,400 (before recosting) would be required, corresponding to four Professional and one General Service position from January through June 2008. The team would consist of the following: (a) one Principal Officer (D-1) who would provide expertise in organization and management, oversee the review and analysis of information, assist in consultations with senior managers and Member States, and lead change management and communications efforts; (b) one Senior Officer (P-5) to advise on human resources management, career development paths and training; (c) one Senior Officer (P-5) to provide expertise in information and communications technology, both applications and infrastructure; (d) one First Officer (P-4) to handle budget matters and financial analysis, and collect and analyse relevant information from offices worldwide; (e) one Administrative Assistant (General Service) to perform general administrative and support functions. Operational costs in the amount of $194,200 (before recosting) would be required for office accommodation, commercial communications, supplies, furniture and equipment related to the aforementioned five positions.

21. Furthermore, resource requirements for the six-month period would include provision for consultancy services in the amount of $234,700 (before recosting), which would enable the Secretariat to obtain external expert advice on best practices and industry trends in developing its own ICT vision, strategy, programme and governance framework. Consultants would be engaged for a period of 20 weeks to assist the Secretariat in: (a) collecting and analysing the latest business and technology trends of the ICT industry including best practices in ICT governance; (b) developing the ICT vision, strategy and programme, and validating the results against the best practices in the industry; (c) identifying alternative governance models and evaluating their pros and cons; and (d) developing the respective roles among United Nations staff, United Nations ICT staff and vendor companies in carrying out ICT work for the Secretariat.

22. In addition, travel funds in the amount of $75,100 (before recosting) would be needed for the Chief Information Technology Officer and the interim team to adequately consult with all key stakeholders on ICT in the Organization and other international organizations during this crucial transition period. For the ICT strategic planning exercise, six regional group meetings would be conducted to understand business needs and priorities, and develop the Organization-wide ICT vision, strategy, and programme. The participants for the group meetings will include representatives from Headquarters departments, offices away from Headquarters, regional economic commissions, and selected field missions. With regard to ICT governance framework development, three trips are envisaged to other international institutions and organizations to evaluate the strength and weakness of their ICT governance framework, and use the knowledge to develop the governance framework for the Secretariat.

23. The Secretary-General proposes that a comprehensive report on the ICT vision, strategy, high-level programme, and governance framework be submitted to the General Assembly at the second part of its resumed sixty-second session. The governance framework to be proposed would take into account all existing ICT resources from all sources of funding and identify any redundancies or offsets available as a result of the transfer of functions from existing entities to the new Office of Information and Communications Technology.

24. It should be noted that the detailed proposal for implementing an enterprise resources planning system in the United Nations Secretariat is covered in a separate report to the General Assembly, as is the proposal for disaster recovery and business continuity. Both the enterprise resources planning project, and the disaster recovery and business continuity project have strong governance structures based on the principles of ICT governance mentioned earlier, and will not be significantly affected by the overall ICT governance framework to be presented to the General Assembly at its resumed sixty-second session.

V. Conclusion and recommendation

25. The General Assembly, recognizing the strategic importance of ICT, approved the position of Chief Information Technology Officer in the Executive Office of the Secretary-General. In the present report, the Secretary-General provides an interim assessment indicating that, to fully achieve the goals the General Assembly intended for this position, the Chief Information Technology Officer needs sufficient central authority and resources to produce significant results for the Organization, and should therefore head a separate office, the Office of Information and Communications Technology, reporting directly to the Executive Office of the Secretary-General. Acknowledging the key role of ICT to the strategic direction of the Organization, the Chief Information Technology Officer will have a role at the highest level of policymaking by being a permanent member of the Management Committee.

26. However, given the importance of ICT for the long-term strategic development of the Secretariat, the Chief Information Technology Officer, who has recently taken up his duties, and other key senior officials will need more time and consultations to address outstanding ICT issues, including the development of the ICT governance framework. A comprehensive exercise will enable the Organization to leverage the full potential of ICT as a critical instrument for modernizing the Organization and effectively supporting management reform. Accordingly, the ICT vision, strategy, high-level programme and governance framework for ICT will be submitted to the General Assembly at the second part of its resumed sixty-second session.

27. **The General Assembly may wish to:**

(a) **Take note of the proposed course of action contained in the present report;**

(b) **Appropriate a total amount of $925,400 (before recosting) under the proposed programme budget for the biennium 2008-2009, comprising $747,900 under section 1, Overall policymaking, direction and coordination; $177,500 under section 28D, Office of Central Support Services; and $68,500 under section 35, Staff assessment, to be offset by an equivalent amount under income section 1, Income from staff assessment, to provide a small interim team for the Chief Information Technology Officer. The provision would represent a charge against the contingency fund.**